AFRD ES&H Operations Committee
71 Conference Room
July 7, 2006
2:00 – 3:00 PM

Minutes

Attendees: Tom Caronna, Wayne Greenway, Sharon Hernandez, Daryl Horler, Steve Lidia, Gianlucca Sabbi, Tom Scarvie, Pat Thomas, Weyland Wong

1. **Program Safety Coordinator Role & Responsibilities**

According the to the 2006 AFRD Integrated Safety Management Plan, Program/Project ES&H Coordinators are expected to:

- Participate in AFRD ES&H Operations Committee activities;
- Inform the Committee of planned activities in their Program/Project and assist in hazard review and work authorization activities;
- Organize QUEST teams and report findings to the Committee;
- Report any accidents, occurrences, hazardous conditions, or concerns that require action and report completion of action items;
- Maintain awareness of their Program/Project ES&H performance. Communicate relevant ES&H information to their Program Head, Project Leaders, and other affected personnel.

In Performance Year 2007 (which began July 1), AFRD is asking Program Safety Coordinators to take a stronger role in helping their Program improve performance in completing JHQs and required safety training, recording and closing out corrective actions in the CATS database, and helping PIs to get their AHDs ready for review on schedule. Each month, you will receive spreadsheets that describe the AHDs and training needed, the open action items in CATS, and the dates AHD renewals are due. You are encouraged to schedule a monthly meeting on your Program Head's Calendar to get together and discuss the best way to improve compliance. **At each month's meeting, you will be asked to give a status report on what is being done to complete JHQs and training, and how your Program plans to close any overdue CATS items**.

Look at the JHQ and training sheets to see if there are any people who are listed as being in your Program who are not currently working in your Program, or who are assigned to the wrong supervisor. Contact Pat Thomas or the HR Center and ask to have discrepancies corrected.

Pat will send monthly e-mails reminding people to complete training. You can help facilitate this by making sure new people are included in the LBNL e-mail system. Class schedules can be found on the EH&S Division website, under the Training group (click on picture of classroom). If there are a lot of training needs under a supervisor, your Program Head may need to talk to the supervisor.

Last month, we had a training session on how to use the CATS database. Written instructions will be sent to Program Safety Coordinators. If you have trouble accessing the database, contact Pat and describe the problem. She may need to ask the database administrator may to expand your access privileges. Supervisors may need your help to enter their walkthrough findings in CATS or close them when the actions are completed.

Look at your AHD list. The spreadsheet is sorted by due date, so the next one due is on the top. If there are renewals coming up in your Program in the next month or two, talk to the PIs and encourage them to start updating their AHDs and lists of authorized personnel. If the experiment has an interlock system, they will need to ensure an interlock test has been completed within the last 6 months before the AHD can be renewed.

2. ES&H News and Lessons Learned

EH&S returnees-- Ken Barat, former LBNL Laser Safety Officer and IBT Program Safety Coordinator, has returned from LLNL to be our Laser Safety Officer again. Keith Gershon, former LBNL Electrical Safety Officer and AFRD EH&S Liaison, has returned from LLNL to assist Tom Caronna in electrical safety.

Shoe Mobile changes—The shoe mobile will be located in a parking lot next to the Bevatron, adjacent to the de-construction area. Please use caution and crosswalks when visiting the shoe mobile.

Lessons Learned

Electrical problems during wax melting

A Mechanical technician working outside Bldg. 58A prepared to melt the wax mandrel interior to a pulse line ion accelerator coil with heater tape. The heating operation occurred for approximately 30 minutes. When the technician added aluminum foil to the set up to reflect and retain heat, a popping sound was heard. The mechanical technician ceased operation, disconnected the electrical power and a second technician found and notified the project electrical engineer. They determined that the heater tape power lead shorted. No shock, injuries, or equipment damage occurred; however, there were indications that the apparatus was energized and there was a risk of shock if someone had made contact while it was energized. LBNL requires heater tapes to be plugged into a GFCI because there has been a history of problems with heater tapes shorting. A GFCI does not prevent electrical shock, but it can reduce the time of exposure to the current and thus reduce the severity of injury.

Investigating this incident was made more difficult because there was an attempt to immediately solve the problem as soon as it occurred, and some equipment had

already been moved and modified before the safety people arrived. Whenever something goes wrong, it is better to stop and preserve the scene until it can be checked by safety personnel. We need to ensure the problem has been identified and mitigated before work resumes.

A GFCI was installed and the operation resumed. Later, a heat gun was plugged into the same circuit as the heater tape to enhance the wax melting. After several hours of the heating, operation the GFCI tripped. A technician went to the GFCI and pressed the reset button. He then heard a bang and observed discharge from the GFCI device. He stopped all operations and removed the device from service. The technician estimated that the two heaters were drawing 2000 watts. The GFCI device was rated for 1800 watts. The overloaded GFCI overheated and failed. The technicians then placed the heat devices on separate circuits and GFCI devices and continued with the wax melting.

Bob Mueller partially disassembled the GFCI from Bldg 58 and took pictures. The fault was obviously thermal in nature. What happened was that a neutral wire in the assembly was touching a screw connecting the hot wire to the output socket. As things heated up in the overloaded GFCI, the heat from the screw melted the insulation on the neutral wire creating a 120V to neutral short in the GFCI. The first time this tripped the GFCI. When the GFCI was reset, the GFCI trip probably failed and what ceased the short was the neutral wire disintegrating. It is important not only to use a GFCI, but also to ensure the GFCI is in good condition and rated for the load.

Fall Accident

There was an accident in the RTA tunnel (58A-104) on June 27. It was a first aid accident, but the circumstances could have resulted in a serious injury. There were several wooden boards placed on the framework inboard of the rails of the RTA apparatus. Some were plywood and some were fiberboard. The boards were covered in paper. The paper covering prevented anyone from seeing the condition of the boards or the material (wood or fiber). The boards were used to set tools and equipment on and it was a common practice by technicians to use the boards as a convenient platform to stand on to work on the experiment. A technician was replacing an ion gauge. He stepped up onto the boards, and successfully removed the old ion gauge without a problem. He was starting to install the new one when the board he was standing on suddenly snapped and he fell feet-first into the hollow cavity of the framework. He grabbed onto the rails to break his fall and his feet landed on a makeshift array of trays that had been placed below to catch falling tools and screws approximately 4 feet below the surface where the technician was standing. He shouted for help but no one responded. He was able to pull himself out and went over to the shop and reported to the acting shop supervisor. He went to Health Services for evaluation and first aid. Surfaces used for standing must be rated for floor use and securely attached. There should be no holes or gaps in floors greater than 1/4 inch that people or objects can fall through. The experiment has been stopped until the area is made safe.

Student Safety

Tom Caronna reminded everyone that summer students are here and we need to help them work safely.

3. Program Forum

At CBP, a new roof is being put on Bldg. 71B. Alon Deutsch is supervising work at Joel Fajans' area in 58A. John Corlett and Steve Lidia are meeting with Alon to discuss safety, especially shop use.

At Fusion, HCX is being modified with a new electron gun and diagnostics. NDCX is being returned to a previous configuration with 4 solenoids and drift compression. DARHT cathode testing is being done in the RTA tunnel.

At ALS, our AFRD group has a student doing computer work.

At Supercon, Helene Felice finished a successful magnet test. The magnet test group is working on the refrigeration system. There may be some magnet assembly work starting in a few weeks. Safety responsibilities for work areas are being defined.

Next Meeting: ES&H Operations Committee – August 4, 2006, 2:00 PM, Bldg. 71 Conference Room